

Exhibit K

WATER SUPPLY ASSESSMENT

CITY OF FRESNO
CANNABIS ORDINANCE PROJECT

FEBRUARY 2020



WATER SUPPLY ASSESSMENT

CANNABIS ORDINANCE PROJECT

Prepared for:

City of Fresno
2600 Fresno Street, 4th Floor
Fresno, CA 93721
Contact Person: Israel Trejo, Planner III
Phone: (559) 621-8003

Consultant:



901 East Main Street
Visalia, CA 93292
Contact: Harry A. Tow, Senior Principal Planner
Phone: (559) 733-0440
Fax: (559) 733-7821

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SECTION 1 - INTRODUCTION

1.1 - Regulatory Requirements

Senate Bill 610 (Chapter 643, Statutes of 2001) amended State law, effective January 1, 2002, to improve the link between information on water supply availability and land use decisions made by cities and counties. The statute requires detailed information regarding water availability to be provided to city and county decision-makers prior to approval of specified large development projects which are subject to CEQA (the California Environmental Quality Act) approval. The statute also requires this detailed information to be included in the administrative record that serves as the evidentiary basis for an entitlement action by the city or county on such projects. The statute-required Water Supply Assessment (WSA) must examine the availability and sufficiency of an identified water supply under normal year, single dry year, and multiple dry year conditions over a 20-year projection, accounting for the projected water demand of the Project in addition to other existing and planned future uses of the identified water supply.

The State Department of Water Resources “Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001” (Guidebook) and the sample format presented in the Guidebook were used as guides in preparing this WSA. The full text of Chapter 643, Statutes of 2001 (SB 610) is included in Appendix A.

1.2 - Project Location

The “Project site” is the entire City of Fresno. Figure 1-1 depicts the City’s location with respect to key groundwater-defining boundaries.

The City of Fresno (City) is located in Fresno County and is situated in the central portion of the San Joaquin Valley, in the State of California. The City encompasses approximately 113 square miles. Fresno is the largest city in Fresno County and has a current population of 536,683 residents (California Department of Finance, 2019).

Figure 1-2 shows the City of Fresno and its relationship to the Project-affect locations.

1.3 - The Project


The City of Fresno is proposing the adoption of an Ordinance Regulating and Permitting Commercial Cannabis Activities by the City of Fresno. The proposed Project, an amendment to Sections 15-2739 and 15-2739.1 of the Fresno Municipal Code, an amendment to Article 33 of Chapter 9 of the Fresno Municipal Code, and to Article 21 of Chapter 12 of the Fresno Municipal Code, relating to adult use and medicinal cannabis retail business and commercial cannabis business¹. It will be the objective of this assessment to determine if the City’s water system can, in compliance with Senate Bill 610, supply the water needed over a 20-year analysis period, for the Project.


¹ Appendix D – Ordinance Amendments (Project)




Project Location - Groundwater

 Project Location

 San Joaquin Valley Groundwater Basin

 Tulare Lake Hydrologic Region

 Kings Groundwater Subbasin



QK Sources:
ESRI Sources: Esri, HERE



Figure 1-1

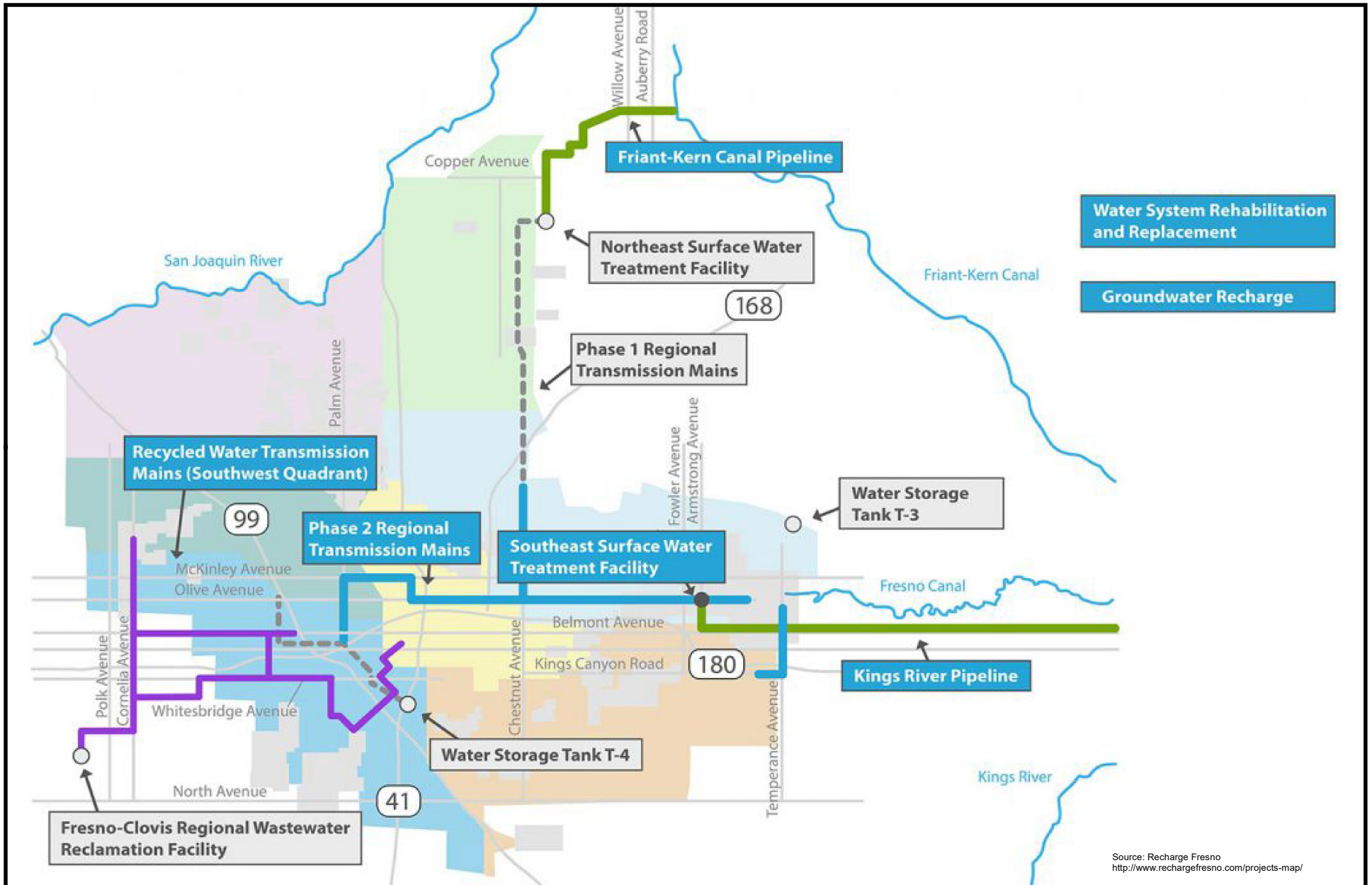


Figure 1-2

- | | | | | |
|-----------------------------------|-----------------------------|---|---|---|
| Raw Water Pipeline | Regional Transmission Mains | Completed Projects | City Council District 2 Steve Brandau | City Council District 5 Luis Chavez |
| Recycled Water Transmission Mains | Existing Water Pipeline | New Projects | City Council District 3 Oliver Baines III | City Council District 6 Garry Bredefeld |
| | | City Council District 1 Esmeralda Soria | City Council District 4 Paul Caprioglio | City Council District 7 Clint Olivier |



The Project proposes to permit up to 8 commercial cannabis cultivation, distribution, and manufacturing facilities within the “cannabis innovation zone” defined as the area bounded by State Route 41, Golden State Boulevard, Church Avenue, East Avenue, and Parallel Avenue, and up to 8 facilities within industrial zoned property within one-half mile of Highway 99 between Shaw and Clinton Avenues, or within one mile of Highway 99 north of Shaw and south of Clinton Avenues, or within one mile of Highway 180 west of Highway 99. All buildings in which a cultivator, distributor, or manufacturer is located shall be located no closer than 1,000 feet from any property boundary containing a residence, school, daycare, or youth center (see Figure 1-3). The proposed Project will also allow for testing laboratories and up to 21 cannabis retail businesses (Figure 1-2).Based on current maximum square footage allowed by State Cannabis licensing and the future allowed square footage requirementsm the assumed maximum total acreage of indoor cannabis production is limited to a16 acres (700,000 sq ft). Section 4 of this assessment evaluates the water demands for all permitted activities: cultivation, distribution, manufacturing, retail, and testing. Table 1-1 below, summarizes the proposed commercial cannabis uses.

**Table 1-1
Commercial Cannabis Uses**

Commercial Cannabis Uses	Eligible Sites	Max. Permits	Max. SF¹
Cultivation, Distribution, and Manufacturing Within Cannabis Innovation Zone	591	8	700,000
Cultivation, Distribution, and Manufacturing Outside of Cannabis Innovation Zone	953	8	
Cannabis Retail Businesses	5,564	21	55,000
Testing Laboratories	13,807	Unlimited	100,000
Totals	20,915	N/A	855,000

¹Maximum square foot used for analysis in this WSA

1.4 - Data Sources and Collection

Data collection was conducted through review of the following resources: aerial photographs; United states Geological Survey (USGS) topographic maps; the City of Fresno 2015 Urban Water Management Plan; the 2006 Clean Water Act (CWA) Section 303(d) List of Water Quality Limited Segments from the State Water Resources Control Board (SWRCB); groundwater basin data from Bulletin 118 – Update 2003 published by the California Department of Water Resources (DWR); personal contact with City of Fresno Water Department staff; flood hazard data from the Federal Emergency Management Agency (FEMA); soils data from the Natural Resources Conservation Service (NRCS); environmental documents from California Bureau of Cannabis Control (CalCannabis) and California Department of Food and Agriculture (CDFA); and field reconnaissance.

Vital data input was received from key staff of the City of Fresno Water Division, Department of Public Works.

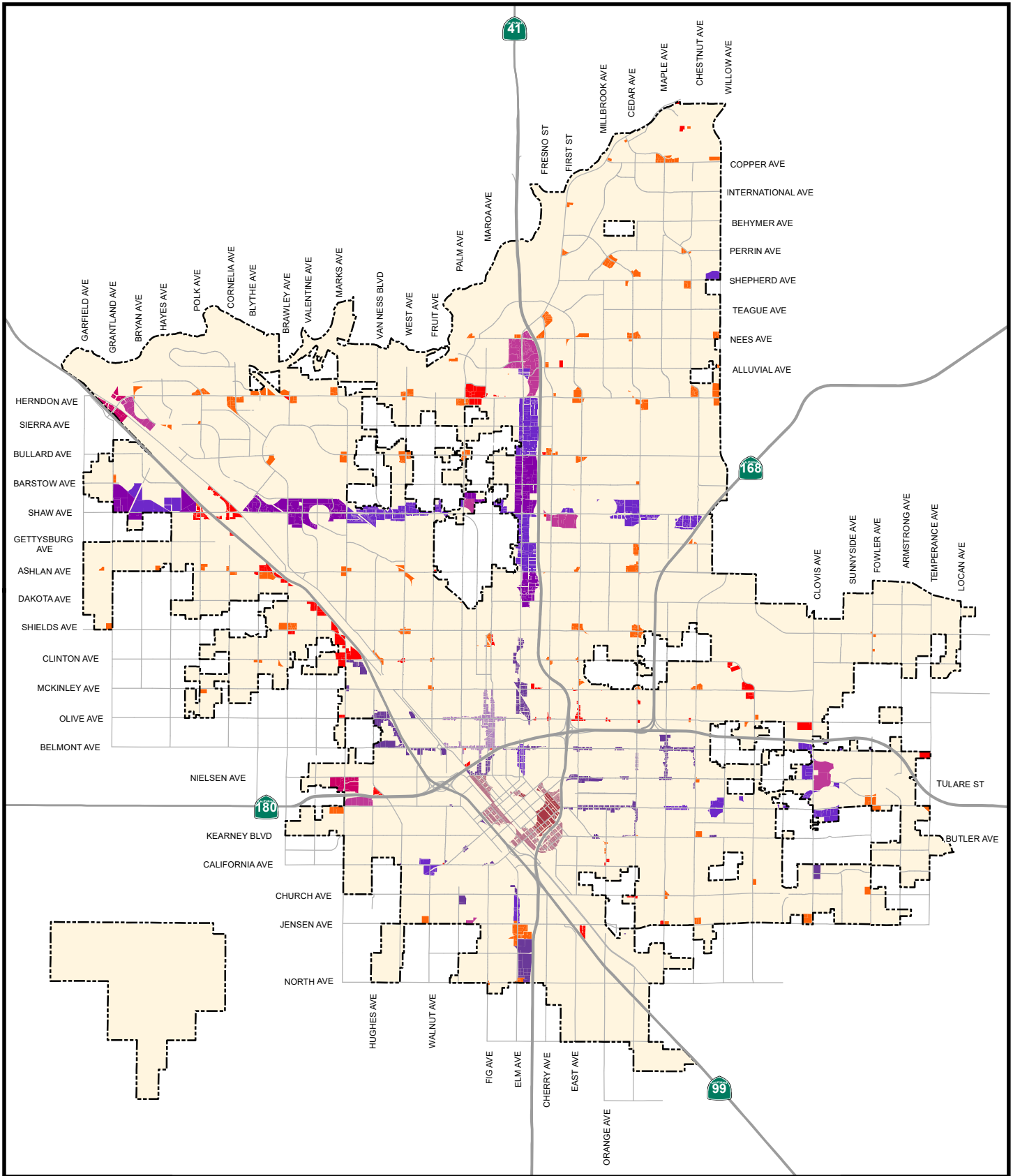


Figure 1-3

Project Sites

- | | | |
|--|---|--|
| DTG - Downtown General | CG - Commercial General | NMX - Neighborhood Mixed-Use |
| DTN - Downtown Neighborhood | CH - Commercial Highway and Auto | RMX - Regional Mixed-Use |
| CMS - Commercial Main Street | CR - Commercial Regional | City Limits |
| CC - Commercial Community | CMX - Corridor/Center Mixed-Use | |



QK Sources: ESRI

SECTION 2 - PROJECT SETTING

2.1 - City of Fresno

The Project is applicable to the entire City of Fresno. The Project sites will occupy both existing urban facilities and vacant areas within the City. The City is located within the Tulare Lake Hydrologic Region, the San Joaquin Valley Groundwater Basin, and the Kings Subbasin thereof (see Figure 1-1).

The City of Fresno provides water service to a variety of customer types within the city limits. It has approximately 133,000 service connections, and as of 2018, provides approximately 120,067-acre feet (af) of potable water annually (36% surface water and 64% ground water). The City currently relies on a combination of surface water and groundwater supplies to meet water demands of the citizens and businesses. As indicated in Table 2-1 below, the City's overall reliance on groundwater as a principal source of water has decreased over the years and is now supplemented with surface water.

**Table 2-1
Groundwater Volume Pumped**

	2011	2012	2013	2014	2015
Total	119,813	115,615	128,510	110,313	83,360

2.2 - Hydrologic Area Climate

The City of Fresno's service area is located in California's San Joaquin Valley in Fresno County along Highway 99. The climate of the area is best described as Mediterranean, characterized by hot dry summers and cool winters. Precipitation in the area averages around 11 inches per year, as shown in Table 2-2, which also shows the average monthly temperature and rainfall. Average evapotranspiration (ETo) is based on data taken from a monitoring station located at California State University Fresno, while precipitation and temperature data are taken from a station at the Fresno Yosemite International Airport.

**Table 2-2
Climate Characteristics**

Month	Standard Monthly Average ETo (inches) ^(a)	Monthly Average Rainfall (inches) ^(b)	Monthly Average Temperature (°F) ^(b)	
			Min.	Max
January	1.14	2.09	37.6	54.6
February	1.92	1.90	40.7	61.5
March	3.68	1.89	43.8	67.0
April	5.36	1.03	48.0	74.4
May	7.34	0.36	54.3	83.5
June	8.32	0.16	60.5	91.7
July	8.71	0.01	65.7	98.3
August	7.74	0.01	64.0	96.4
September	5.62	0.15	59.7	90.8
October	3.62	0.53	51.2	79.7
November	1.79	1.13	42.4	65.3
December	1.07	1.64	37.3	54.7
Annual Total/Average	56.31	10.89	50.4	76.5

(a) CIMIS Website: <http://www.cimis.water.ca.gov>, Station 80 Fresno State (1988 to 2015) Monthly Average ETo Report, December 2015 (downloaded January 12, 2016)

(b) Data from Western Regional Climate Center (<http://www.wrcc.dri.edu>) for Fresno WSO AP, California Period of Record 01/01/1948 to 1/20/2015 (downloaded January 12, 2016)

The City’s water use in the summer months is significantly higher than in the winter, reflecting increased water use for irrigation purposes during the hot, dry summers.

2.3 - The Groundwater Resource

The Kings Subbasin, is generally bounded on the north by the San Joaquin River; on the west by the Fresno Slough; on the south by the Kings River and Cottonwood Creek; and on the east by the Sierra foothills. The State Department of Water Resources (DWR) has classified the Kings Subbasin as being in a state of critical overdraft [in its Bulletin 118-2003]. Figure 1- 1 shows the City’s location relative to the Kings Subbasin boundaries.

The upper several hundred feet of alluvium within the Kings Subbasin generally consists of highly permeable, coarse-grained, deposits which are termed older alluvium. Coarse-grained stream channel deposits, associated with deposits by the ancestral San Joaquin and Kings Rivers, underlie much of the northwest portion of the City. A recent study (completed in 2004) confirmed the presence of a laterally extensive clay layer, at an average depth of approximately 250 feet below the ground surface, beneath most of the south and southeastern portions of the City.

Below the older alluvium, to depths ranging from about 600 to 1,200 feet below ground surface, the finer-grained sediments of Tertiary-Quaternary continental deposits are typically encountered. Substantial groundwater has been produced and utilized from these depths by the City; however, deeper deposits located in the southeastern and northern portions of the City have produced less groundwater.

There are also reduced deposits in the northern and eastern portions of the City, at depths generally below 700 or 800 feet, which are associated with high concentrations of iron, manganese, arsenic, hydrogen sulfide, and methane gas. Groundwater at these depths does not generally provide a significant source for municipal supply wells.

2.4 - The Groundwater Overdraft

The City has long made efforts towards offsetting the decline of groundwater levels and minimizing overdraft conditions through an active recharge program that started in 1971. Through cooperative agreements with the Fresno Municipal Flood Control District (FMFCD) and Fresno Irrigation District (FID), the City has access to not only City-owned basins, but also those of these two agencies. Utilizing available surface water supplies, the City was able to recharge approximately 50,000 af/yr for the period of 2000-2013; however, with the reduction in available surface water supplies, intentional recharge declined to 34,700 af in 2014 and 19,800 af in 2015.

In recent years intentional groundwater recharge has increased. Recharge in 2016 was 65,650 af/yr, 2017 was 72,116 af/yr, and 2018 was 63,833 af/yr. This increase will be attained despite the direct usage increase of surface water currently (2019) occurring as a result of the new northeast Fresno surface water supply pipeline and southeast Fresno surface water treatment facility now in service. The Fresno City Council has adopted the Fresno Metropolitan Water Resources Management Plan which has a goal to attain a balanced use of groundwater by the year 2025. Peak groundwater use occurred in 2002 with 165,542 af produced. Groundwater produced in 2018 was 76,797 af. By attaining this level of recharge, the City would optimize the use of available supplies, and further improve groundwater conditions as declines in natural recharge occur due to urbanization.

The City's successful metering program, and concurrent drought-related restrictions on water usage, have made a significant difference in subbasin overdraft since 2002.

2.5 - Water Quality

Groundwater within the Kings Subbasin generally meets primary and secondary drinking water standards for municipal water use and is described as being bicarbonate-type with calcium, magnesium, and sodium as the dominant ions. Total dissolved solids (TDS) concentrations rarely exceed 600 mg/L, and typically range from 200 to 700 mg/L. However, the groundwater basin is threatened by chemical contaminants that affect the City's ability to fully use the groundwater basin resources without some type of wellhead treatment in certain areas. Many different types of chemical pollutants have contaminated portions of the Kings Subbasin. Some of the major contaminant plumes include 1,2-Dibromo-3-Chloropropane (DBCP), ethylene dibromide (EDB), trichloropropane (TCP), other volatile organic compounds (VOCs) such as trichloroethylene (TCE) and tetrachloroethylene (PCE), methyl tertiary butyl ether (MTBE), nitrate (NO₃), manganese (Mn), radon (Rn), chloride (Cl), and iron (Fe). The City has received settlements in a number of lawsuits related to these contaminants and has constructed wellhead treatment systems and implemented blending plans for a number of wells impacted by nitrates. As a result of

State reductions in available surface water supplies, intentional recharge declined to 34,700 af in 2014 and 19,800 af in 2015. The City now has 16 wells (of these tested to date, out of service for excessive TCP levels, and anticipates expenditure of in excess of \$300 million to treat all contaminated wells.

The City's second source of water is surface water from the Sierra Nevada (the Kings and San Joaquin Rivers) delivered via Fresno Irrigation District and Friant-Kern Canals. This water is stored in both Millerton and Pine Flat Lakes, located in the foothills east of Fresno. Both surface water and groundwater are treated to drinking water standards at state-of-the-art treatment facilities. Surface water treatment facilities are illustrated on Figure 4.10-2; groundwater treatment is at wellheads. The Central Valley Project contract is for 60,000 af/yr. The Fresno Irrigation District contract is based on a percentage of annexed land in the City that is part of the District's boundaries.

SECTION 3 - APPLICABLE CODES AND REGULATIONS

The complexity of the Project warrants a summary of the various codes and regulations which will affect its implementation.

Federal

CLEAN WATER ACT (CWA) AND ASSOCIATED PROGRAMS

The CWA (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires individual states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is delegated to, and administered by, the nine Regional Water Quality Control Boards (RWQCBs). The State Water Resources Control Board (SWRCB) has elected to adopt one statewide general permit for California that applies to all construction-related stormwater discharges.

Construction activities that are subject to this general permit include clearing, grading, stockpiling, and excavation that result in soil disturbances to at least one acre of the total land area. Construction activities that disturb less than one acre are still subject to this general permit if the activities are part of a large common plan of development or if significant water quality impairment would result. In California, the Construction General Permit, revised in September 2009, is implemented by the SWRCB.

The discussion below specifies provisions of the CWA that may relate to cultivation activities. Of particular relevance are Sections 401, 402, 404, and 303.

Section 401

CWA Section 401 requires an evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the United States. In California, USEPA has delegated to SWRCB and the RWQCBs the authority to issue water quality certifications. Each RWQCB is responsible for implementing Section 401 in compliance with the CWA and that region's water quality control plan (also known as a Basin Plan). Applicants for a federal license or permit to conduct activities that might result in the discharge to waters of the United States must also obtain a Section 401 water quality certification to ensure that any such discharge would comply with the applicable provisions of the CWA.

Section 402

Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES). Under Section 402, a permit is required for point-source discharges of pollutants into navigable waters of the United States (other than dredge or fill material, which are addressed under Section 404). In California, the NPDES permit program is also administered by the SWRCB. Permits contain specific water quality-based limits and establish pollutant monitoring and reporting requirements. Discharge limits in NPDES permits may be based on water quality criteria designed to protect designated beneficial uses of surface waters, such as recreation or supporting aquatic life. The various NPDES permits that may apply to the proposed Project are discussed below.

Section 404

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S., which include all navigable waters, their tributaries, and some isolated waters, as well as some wetlands adjacent to the afore-mentioned waters (33 CFR Section 328.3). Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial waterbodies such as swimming pools, and water-filled depressions (33 CFR Part 328). Areas meeting the regulatory definition of waters of the U.S. are subject to the jurisdiction of USACE under the provisions of CWA Section 404. Construction activities involving placement of fill into jurisdictional waters of the U.S. are regulated by USACE through permit requirements. No USACE permit is effective in the absence of state water quality certification pursuant to Section 401 of the CWA.

With respect to cannabis cultivation, dredge or fill activities within waters of the U.S. would primarily be associated with site development (i.e., access road crossings of creeks), and not cultivation activities themselves, which would have less potential to result in dredge or fill within jurisdictional waters.

NPDES General Permit for Construction Activities

Most construction projects that disturb one-acre or more of land are required to obtain coverage under the SWRCB's *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ - "Construction General Permit") (SWRCB 2009). The Construction General Permit requires the applicant to file a Notice of Intent to discharge stormwater and prepare and implement a stormwater pollution prevention plan (SWPPP). The SWPPP must include a site map and a description of the proposed construction activities; demonstrate compliance with relevant local ordinances and regulations; and present a list of best management practices (BMPs) that will be implemented to prevent soil erosion and protect against discharge of sediment and other construction-related pollutants to surface waters.

Permittees are further required to conduct monitoring and reporting to ensure that BMPs are implemented correctly and are effective in controlling the discharge of construction-related pollutants. Additionally, if a project that receives coverage under the Construction General Permit is located in an area that is not subject to a municipal stormwater permit (described below), the project must implement post-construction stormwater controls in accordance with permit Section XIII, Post-Construction Standards.

Construction of facilities that may eventually be used for licensed cultivation under the Proposed Program, if that construction involves construction and/or land disturbance activities on one-acre or more of land, may require coverage under the Construction General Permit. The Construction General Permit would not apply to cultivation itself.

NPDES Permits for Municipal Stormwater Discharges

The Municipal Storm Water Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s). Storm water is runoff from rain or snow melt that runs off surfaces such as rooftops, paved streets, highways, or parking lots, and it can carry pollutants such as oil, pesticides, sediment, trash, bacteria, and metals. This runoff ultimately may reach surface waterbodies.

The municipal or urban areas addressed by the MS4 permit program commonly include large areas of impervious surface. These large impervious surfaces can contribute to increased pollutant loads, with results such as turbid water, nutrient enrichment, bacterial contamination, increased temperature, and accumulation of trash. In addition, these impervious areas can contribute to an increase in runoff duration, volume, and velocity, and streams may be affected by streambed scouring, sedimentation, and loss of aquatic and riparian habitat.

MS4 permits were established in two phases. Under Phase I, which started in 1990, the RWQCBs adopted NPDES permits for medium-sized (serving 100,000-250,000 people) and large (serving more than 250,000 people) municipalities. Most of these permits have been issued to groups of co-permittees, encompassing entire metropolitan areas. Phase I MS4 permits generally require the discharger to develop and implement a Storm Water Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the CWA. These management programs specify measures used to address various program areas, including public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations. MS4 permits themselves may specify management measures for the program areas, eliminating the need for dischargers to develop a Storm Water Management Plan/Program. In general, medium-sized and large municipalities also are required to conduct monitoring.

Under Phase II, the SWRCB issued the first General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) in 2003, to provide permit coverage for smaller municipalities (population less than 100,000), including nontraditional Small MS4s,

which are facilities such as military bases, public campuses, and prison and hospital complexes. The current Phase II Small MS4 General Permit, *NPDES General Permit No. CAS000004, Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small MS4s*, was adopted in 2013. The Phase II Small MS4 General Permit addresses Phase II permittees statewide.

Proposed Program activities may occur in locations with permit coverage under the MS4 program and as such, licensed cultivation activities may be subject to the requirements of such permits with regard to their stormwater discharges.

Section 303

Section 303 of the federal CWA (as well as the State-level Porter-Cologne Act, discussed further below) requires that California adopt water quality standards. In addition, under CWA Section 303(d), states are required to identify a list of "impaired waterbodies" (those not meeting established water quality standards), identify the pollutants causing the impairment, establish priority rankings for waters on the list, and develop a schedule for preparation of control plans to improve water quality. USEPA then approves or modifies the state's recommended list of impaired waterbodies. Each RWQCB must update its Section 303(d) list every two years. Waterbodies on the list are defined to have no further assimilative capacity for the identified pollutant, and the Section 303(d) list identifies priorities for development of pollution control plans for each listed waterbody and pollutant.

The pollution control plans mandated by the CWA Section 303(d) list are called Total Maximum Daily Loads (TMDLs). The TMDL is a "pollution budget," designed to restore the health of a polluted waterbody and provide protection for designated beneficial uses. The TMDL also contains the target reductions needed to meet water quality standards and allocates those reductions among the pollutant sources in the watershed (i.e., point sources, non-point sources, and natural sources) (40 Code of Federal Regulations [CFR] Section 130.2). A TMDL is unique to a specific waterbody and its surrounding pollutant sources and is not applicable to other waterbodies.

The current effective USEPA-approved Section 303(d) list for waterbodies in California is the 2010 list, which received final approval by USEPA on October 11, 2011. For the Proposed Program, cultivation activities that may result in discharge of a contaminant to waterbodies listed as impaired for that contaminant would be of particular concern because of the water bodies' lack of assimilative capacity for that contaminant.

National Toxics Rule and California Toxics Rule

USEPA issued the National Toxics Rule (NTR) in 1992. The goal of the NTR is to establish numeric criteria for specific priority toxic pollutants, to ensure that all states comply with the requirements in CWA Section 303. A total of 126 priority toxic pollutants currently are specified in the NTR.

In 2000, USEPA promulgated the California Toxics Rule (CTR), which contains additional numeric water quality criteria for priority toxic pollutants for waters in the state. The CTR fills a gap in California water quality standards that was created in 1994 when a State court overturned the State's water quality control plans containing water quality criteria for priority toxic pollutants. These federal criteria are legally applicable in California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA.

The NTR and CTR include toxicity thresholds for freshwater and saltwater systems and human health for a number of chemicals which may be used for permitted or unpermitted cannabis cultivation, including heavy metals (which may be found in fertilizers, irrigation water, soils, and other grow media), hydrocarbons (found in fuels and lubricants for powered equipment used in cultivation), and pesticides.

Federal Antidegradation Policy

The federal antidegradation policy includes minimum criteria to protect existing beneficial uses, ensure that the level of water quality is offset to maintain existing uses, and prevent degradation of water quality. This policy stipulates that states must adopt the following minimum provisions and allows states to adopt even more stringent rules (40 CFR Part 131):

- (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
- (2) Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the state finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the state's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.
- (3) Where high quality waters constitute an outstanding National resource, such as waters of National and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

Permits issued by the SWRCB and RWQCBs under the CWA or Porter-Cologne Act, including permits for activities conducted in accordance with the proposed Project, must incorporate provisions to ensure this policy is met.

SAFE DRINKING WATER ACT

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the United States. This SDWA focuses on all waters either designed or potentially designed for drinking water use, whether from surface water or groundwater sources. The SDWA and subsequent amendments authorized the EPA to establish health-based standards, or maximum contaminant levels (MCLs), for drinking water to protect public health against both natural and anthropogenic contaminants. All owners or operators of public water

systems are required to comply with these primary (health-related) standards. State governments, which can be approved to implement these primary standards for the EPA, also encourage attainment of secondary (nuisance-related) standards. At the federal level, the EPA administers the SDWA and establishes MCLs for bacteriological, organic, inorganic, and radiological constituents (United States Code Title 42, and Code of Federal Regulations Title 40). At the State level, California has adopted its own SDWA, which incorporates the federal SDWA standards with some other requirements specific only to California (California Health and Safety Code, Section 116350 et seq.).

The 1996 SDWA amendments established source water assessment programs pertaining to untreated water from rivers, lakes, streams, and groundwater aquifers used for drinking water supply. According to these amendments, the EPA must consider a detailed risk and cost assessment, as well as best available peer-reviewed science, when developing standards for drinking water. These programs are the foundation of protecting drinking water resources from contamination and avoiding costly treatment to remove pollutants. In California, the Drinking Water Source Assessment and Protection (DWSAP) program fulfills these federal mandates. The California Department of Public Health is the primary agency for developing and implementing the DWSAP program and is responsible for performing the assessments of existing groundwater sources.

State

DEPARTMENT OF WATER RESOURCES (DWR)

DWR's major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water facilities voluntary water transfers; and, when needed, operates a State drought water bank.

The California Water Code (Water Code) section 13149 was enacted to require the State Water Resources Control Board (Board), in consultation with the California Department of Fish and Wildlife (CDFW), to adopt interim and long-term principles and guidelines for the diversion and use of water for cannabis cultivation in areas where cannabis cultivation may have the potential to substantially affect instream flows. The legislation requires the Board to establish these principles and guidelines as part of a state policy for water quality control. The Board has adopted policies to guide cannabis production. The Cannabis Cultivation Policy: Principles and Guidelines for Cannabis Cultivation (2019) guide outlines requirements for cannabis cultivation with regard to management practices and permits required prior to operation (State Water Resources Control Board, 2019).

The State of California has directed that, under the direction of the Board, local agencies representing each critically impacted groundwater basin in the State submit to the State by January 2020 a plan for sustainable groundwater management for that basin (SGMA). In Fresno County that document is under preparation and public review. The City is a member of the North Kings Groundwater Sustainability Authority (NKGSA). The draft Groundwater Sustainability Plan for NKGSA was submitted to the California Department of Water Resources (DWR) on January 28, 2020.

State Water Resources Control Board

The National Pollution Discharge Elimination System (NPDES) was established per the 1972 amendments to the Federal Water Pollution Control Act, or Clean Water Act (CWA), to control discharges of pollutants from point sources (Section 402). Amendments to the CWA created a new section to the Act, which is devoted to stormwater permitting, with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The State Water Resources Control Board (SWRCB) issues both general construction permits and individual permits under this program.

As required by the California Water Code (Section 13240) and supported by the CWA, each RWQCB must formulate and adopt a water quality plan (Basin Plan) for its region. The Basin Plan includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the CWA, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain water quality standards. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels needed to meet the beneficial uses, plans for improving water quality are included. The Basin Plan reflects, incorporates and implements applicable portions of a number of national and statewide water quality plans and policies, including the Porter-Cologne Act, California Water Code and the CWA.

The SWRCB developed a policy for water quality control to establish principles and guidelines for cannabis cultivation statewide. The principles and guidelines include measures to protect springs, wetland, and aquatic habitats from negative impacts of cannabis cultivation. The policy includes instream flow objectives, limits on diversions, and requirements for screening of diversions and elimination of barriers to fish passage. The policy also includes requirements that apply to groundwater extractions, forbearance periods, off-stream storage requirements, riparian buffers, and irrigation conservation measures as well as other best management practices.

As discussed above, the primary responsibility for the protection of water quality in California rests with the SWRCB. The SWRCB sets Statewide policy for the implementation of State and Federal laws and regulations. To do this more effectively, the SWRCB is divided into nine regional water quality control boards (RWQCBs). The RWQCBs adopt and

implement Water Quality Control Plans (Basin Plans) that recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities.

The City of Fresno is within the Central Valley RWQCB (Regional Board 5F). The jurisdiction of the Central Valley RWQCB extends from the Oregon border, over the valley and foothills from Redding to Fresno, through the Central Valley, to the border with Los Angeles County.

Central Valley Regional Water Quality Control Board

On October 2, 2015, the Central Valley Regional Water Quality Control Board adopted the General Waste Discharge Requirements Order for Discharges of Waste Associated with Medical Cannabis Cultivation Activities Order No. RS-2015-0113 (Central Valley Order). The CVWQCB separates the cultivators into Tiers based on the criteria including area of cultivation, slopes and presence of watercourses. These Tiers are shown in *Table 4.10-2: CVWQCB Tiers*, below. All cannabis cultivators not currently enrolled under the Central Valley Regional Water Quality Control Board Order No. RS-2015-0113 (Central Valley Order) are required to apply for coverage under the Cannabis General Order. Once an online application is submitted and the applicable fee is paid, a Notice of Applicability (NOA) will be issued to the enrollee by the appropriate Regional Water Quality Control Board. However, beginning July 1, 2019, the General Order will default to the SWRCB standards and individual RWQCBs will no longer set their own criteria.

Table 3-1 – CVWQCB Tiers

Tier 1	Cannabis Cultivators whose cultivation areas and associated facilities are located on less than 30% slopes, occupy and/or disturb less than 1/4 acre, AND are not located within 200 feet of a wetland, Class I or II watercourse
Tier 2	Cannabis Cultivators whose cultivation areas and associated facilities are located on less than 30% slopes, occupy and/or disturb less than 1 acre and less than 50% of the Cultivator's/Landowner's parcel, AND are not located within 200 feet of a wetland, Class I or II watercourse
Tier 3	Cannabis Cultivators whose cultivation areas and associated facilities are located on greater than 30% slopes, occupy and/or disturb more than 1 acre or more than 50% of the Cultivator's/Landowner's parcel, OR are within 200 feet of a wetland, Class I or II watercourse

Cannabis Cultivation Regulation

Pursuant to the Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA), the SWRCB and RWQCBs are developing a regulatory program to protect waters of the State from harmful activities that could result from cannabis cultivation. As stated above, SWRCB and the nine RWQCBs are the primary agencies tasked with water regulation and water

quality protection; therefore, while CDFA is the lead agency for this PEIR, potential water quality and related impacts from cannabis cultivation remain under the water agencies' primary jurisdiction. SWRCB's and RWQCB's regulatory program would prohibit waste discharges from cannabis-related agricultural practices, land clearing, and grading activities in rural areas and forests. SWRCB adopted a general order on October 17, 2017, regarding waste discharge requirements for cannabis cultivation operations. Cultivators whose operations occupy and/or disturb areas above a certain threshold and/or are within certain designated setbacks or above certain slope designations must apply for coverage under the SWRCB's order for waste discharge. At the same time, SWRCB adopted a Cannabis Cultivation Policy that outlines policies for water quality and water rights including flow and gaging requirements, waste discharge requirements, exemptions, and enforcement. The SWRCB's guidance will apply to cannabis cultivation sites statewide.

SWRCB 's final guidance document and order will take effect following adoption by the Office of Administrative law. This is expected to be prior to the issuance of licenses for cannabis cultivation (January 1, 2018). In the interim period while the guidance is being established, other permits (e.g., General Construction Permit, General Industrial Permit, Irrigated Lands Regulatory Program (ILRP), MS4 permits, general permits established by the NCRWQCB and CVRWQCB, and/or individual WDRs) may apply to cannabis cultivation activities.

State Drinking Water Standards

Title 22, Division 4, Chapter 15, of the California Code of Regulations establishes parameters for safe drinking water throughout the state. These drinking water standards are similar to, but in many cases more stringent than, federal standards. Title 22 contains both primary standards, and secondary standards related to aesthetics (taste and odor). These standards include limits for water quality parameters that may be found in runoff from permitted or unpermitted cultivation sites, such as heavy metals, pesticides, petroleum hydrocarbons, color, foaming agents, turbidity, and total dissolved solids/specific conductance.

Policy for Implementation of Toxics Standards in Inland Surface Waters, Enclosed Bays, and Estuaries of California

In 1994, SWRCB and USEPA agreed to a coordinated approach for addressing priority toxic pollutants in inland surface waters, enclosed bays, and estuaries of California. In March 2000, SWRCB adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, commonly referred to as the State Implementation Policy. This policy implements NTR and CTR criteria and applicable Basin Plan objectives for toxic pollutants. When a RWQCB issues any permit allowing the discharge of any toxic pollutant(s) in accordance with the CWA or the Porter-Cologne Act, the permit's promulgation and implementation must be consistent with the State Implementation Policy's substantive or procedural requirements. Any deviation from the State Implementation Policy requires the concurrence of USEPA if the RWQCB is issuing any permit under the CWA Consistency with the State Implementation Policy would occur when water permits are issued for Proposed Program activities.

California Antidegradation Policy

SWRCB enacted the Statement of Policy with Respect to Maintaining High Quality of Waters in California, which is also referred to as the California antidegradation policy. This policy is used to ensure that high-quality water is maintained, and it limits the discharge of pollutants into high-quality water in the state (Resolution Number 68-16; SWRCB 1968), as follows:

(1) Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

(2) Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

Similar to the federal anti-degradation policy (described above), permits issued by SWRCB and the RWQCBs under the CWA or Porter-Cologne Act for activities conducted under the Proposed Program must incorporate provisions to ensure that this State-level policy is met.

California Pesticide Management Plan for Water Quality

The California Pesticide Management Plan for Water Quality is a joint effort between the California Department of Pesticide Regulation (CDPR), county agricultural commissioners, SWRCB, and the RWQCBs to protect water quality from pesticide pollution. To reduce the possibility of pesticides entering groundwater or surface water, a four-stage approach was designed by CDPR and SWRCB. Stage 1 involves educational outreach to the community to prevent pesticide contamination in water supplies. Stage 2 occurs after pesticides are detected in a water supply, and an appropriate response is selected that is safe and site specific. If Stage 2 is not effective, then Stage 3 tactics are employed, which include implementing restricted material use permit requirements, regulations, and other regulatory authority by CDPR and the county agricultural commissioners. In addition, SWRCB and the RWQCBs can employ Stage 4 and a variety of water quality control planning programs and other regulatory measures to protect water quality as necessary.

Surface Water Protection Program

CDPR implements the California Pesticide Management Plan for surface water protection through its Surface Water Protection Program, under a Management Agency Agreement with SWRCB. The Surface Water Protection Program is designed to characterize pesticide residues, identify contamination sources, determine flow of pesticides to surface water, and

prepare site-specific mitigation measures. The program addresses both agricultural and nonagricultural sources of pesticide residues in surface waters. It has preventive and response components that reduce the presence of pesticides in surface waters. The preventive component includes local outreach to promote management practices that reduce pesticide runoff. Prevention also relies on CDPR's registration process, in which potential adverse effects on surface water quality, and particularly those in high-risk situations, are evaluated. The response component includes mitigation options to meet water quality goals, recognizing the value of self-regulating efforts to reduce pesticides in surface water as well as regulatory authorities of CDPR, SWRCB, and the RWQCBs.

Pesticide Contamination Prevention Act

The Pesticide Contamination Prevention Act, approved in 1985, was developed to prevent further pesticide contamination of groundwater from legal agricultural pesticide applications. The act defines pesticide pollution as "the introduction into the groundwaters of the state of an active ingredient, other specified product, or degradation product of an active ingredient of an economic poison above a level, with an adequate margin of safety that does not cause adverse health effects." CDPR has compiled a list of pesticide active ingredients on the Groundwater Protection List that have the potential to pollute groundwater. These various pesticides are reviewed, and their use is modified when they are found in groundwater.

Groundwater Protection Program

CDPR implements the Pesticide Contamination Prevention Act through its Groundwater Protection Program, which is coordinated with SWRCB under the California Pesticide Management Plan. The Groundwater Protection Program evaluates and samples pesticides to determine whether they may contaminate groundwater, identifies areas sensitive to pesticide contamination, and develops mitigation measures to prevent the movement of pesticides. CDPR may adopt regulations to carry out these mitigation measures. CDPR conducts four groundwater monitoring programs. The first monitors whether pesticides on the Groundwater Protection List with the potential to pollute have been found in groundwater. The second type is four-section monitoring, which monitors wells in the vicinity of a contaminated well. The third monitoring type is sensitive-area monitoring that identifies areas sensitive to pesticide pollution. The fourth type is investigative monitoring, used to identify and understand the factors that affect pesticide movement into groundwater.

State Water Rights System

SWRCB administers a water rights system for the diversion of surface waters (springs, streams, and rivers), including diversion of water from subterranean streams flowing in known and definite channels. The granting of a water right provides permission to withdraw water from a river, stream, or groundwater source for a "reasonable" and "beneficial" use. Water right permits and licenses identify the amounts, conditions, and construction timetables for a proposed diversion. Before issuing the permit, SWRCB must take into

account all prior rights and the availability of water in the basin, as well as the flows needed to preserve instream uses such as recreation and fish and wildlife habitat. Water rights are administered using a seniority system based on the date of applying for the water right—commonly referred to as "first in time, first in right." Junior water rights holders may not divert water in a manner that would reduce the ability of senior water rights holders to exercise their water right.

All surface water used for cannabis cultivation must be associated with a valid water right, whether the cultivator personally holds such a water right or it is held by the water purveyor supplying the cultivation operation (i.e., a municipal water system or a water delivery service).

Water Rights Administration for Cannabis Cultivation

MAUCRSA contains provisions that are directly relevant to SWRCB's water rights permit process. For example, Section 26060.1(b) of the Business and Professions Code requires that SWRCB, in accordance with Section 13149 of the California Water Code and in consultation with the California Department of Fish and Wildlife (CDFW) and CDFA, shall ensure that individual and cumulative effects of water diversion associated with cultivation of cannabis do not affect the instream flows needed for fish spawning, migration, and rearing or the flows needed to maintain natural flow variability. California Water Code Section 13149 goes on to describe that this is to be accomplished through adoption of principles and guidelines for diversion and use of water for cannabis cultivation in areas where cannabis cultivation may have the potential to substantially affect instream flows. The principles and guidelines adopted in October 2017 by the SWRCB address topics such as instream flow objectives, limits on diversions, and requirements for screening of diversions and elimination of barriers to fish passage. The principles and guidelines include requirements that apply to groundwater extraction where it may affect surface flows. SWRCB, CDFW, and CDFA are actively coordinating on the development and implementation of the principles and guidelines.

As part of this, under MAUCRSA, applicants proposing to divert surface water must possess a valid water right. Specifically, an application for a license issued by CDFA will be required to identify at least one of the following water sources:

1. Retail water supplier;
2. Groundwater well;
3. Rainwater catchment system; or
4. Diversion from a surface water body or underground stream flowing in a known and definite channel.

CDFA's regulations will describe the supplemental information requirements for water diversions:

1. A copy of a registration, permit, or license issued under Part 2 (commencing with Section 1200) of Division 2 of the California Water Code that covers the diversion;
2. A copy of any statements of diversion and use filed with the SWRCB before October 31, 2017 detailing the water diversion and use;
3. A copy of a statement of water diversion and use, filed with SWRCB before October 31, 2017, demonstrating that the diversion is authorized under a riparian right and that no diversion occurred in any calendar year between January 1, 2010, and January 1, 2017;
4. For a water source where the applicant has claimed an exception from the requirement to file a statement of diversion and use, documentation, submitted to SWRCB, establishing that the diversion is subject to subdivision (a), (c), (d), or (e) of Section 5101 of the California Water Code.

SWRCB issued a notice on May 19, 2017, providing guidance and making available the forms to be filed to meet these requirements.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), passed in 2014, became law in 2015, and created a legal and policy framework to manage groundwater sustainably at a local level. The SGMA allows local agencies to customize groundwater sustainability plans to their regional economic and environmental conditions and needs and establish new governance structures, known as groundwater sustainability agencies (GSAs) (State of California 2015). The SGMA requires that a groundwater sustainability plan (GSP) be adopted for groundwater basins designated as high and medium priority (127 out of 515 basins and sub basins) under the California Statewide Groundwater Elevation Monitoring program (described below) by 2020 for basins with critical overdraft of underground aquifers. GSPs are intended to facilitate the use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results. Undesirable results are defined as the following:

1. Chronic lowering of groundwater levels (not including overdraft during a drought if a basin is otherwise managed);
2. Significant and unreasonable reduction of groundwater storage;
3. Significant and unreasonable seawater intrusion;
4. Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies;
5. Significant and unreasonable land subsidence that substantially interferes with surface land uses; and

6. Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

GSPs are required to include measurable objectives, as well as interim milestones in 5-year increments, to achieve the sustainability goal for the basin for the long-term beneficial uses of groundwater. The GSP may, but is not required to, address undesirable results that occurred before, or had not been corrected prior to the date that the SGMA went into effect. The GSA has the discretion to decide whether to set measurable objectives and the timeframes for achieving any objectives for undesirable results that occurred before 2015. Additionally, GSPs are required to include components related to the monitoring and management of groundwater levels within the basin, mitigation of overdraft, and a description of surface water supply used or available for use for groundwater recharge or in lieu use.

As with other local regulatory requirements, GSP requirements may apply to licensed cultivators located within the boundaries of a GSA and using groundwater as a source; the source could include on- or off-site wells, as well as supplies from water purveyors or water delivery services that have groundwater as some component of their supply.

California Statewide Groundwater Elevation Monitoring Basin Prioritization

In 2009; the California State Legislature amended the California Water Code with SBx7-6, which mandates a statewide groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in California. Under this amendment, DWR established the California Statewide Groundwater Elevation Monitoring (CASGEM) program, which establishes the framework for regular, systematic, and locally managed monitoring in all of California's groundwater basins. To facilitate implementation of the CASGEM program and focus limited resources, as required by the California Water Code, DWR ranked all of California's basins by priority: High, Medium, Low, and Very Low. DWR's basin prioritization was based on the following factors:

1. Population overlying the basin
2. Rate of current and projected growth of the population overlying the basin
3. Number of public supply wells that draw from the basin
4. Total number of wells that draw from the basin
5. Irrigated acreage overlying the basin
6. Degree to which persons overlying the basin rely on groundwater as their primary source of water
7. Any documented impacts on the groundwater within the basin, including overdraft, subsidence, saline intrusion, and other water quality degradation

8. Any other information determined to be relevant by DWR

Cannabis General Order

On October 17, 2017, the State Water Resources Control Board (State Water Board) adopted the current Cannabis Cultivation Policy Principles and Guideline for Cannabis Cultivation (Cannabis Policy) and the General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (Cannabis General Order), which implements the Cannabis Policy (WQ 2017-0023-DWQ). On December 18, 2017, the state's Office of Administrative Law approved the Cannabis Policy, making the Cannabis Policy and Cannabis General Order effective as of that date. The Cannabis Policy is implemented through the Small Irrigation Use Registration (SIUR) Program and the Cannabis General Order. Compliance with the Cannabis Policy is required to obtain a license from the California Department of Food and Agriculture (CDFA) under its CalCannabis Licensing Program.

On September 28, 2018, the State Water Board released proposed updates to the Cannabis Cultivation Policy - Principles and Guidelines for Cannabis Cultivation (Cannabis Policy), Cannabis Cultivation Policy Staff Report (Staff Report), and General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (Cannabis Cultivation General Order) for public comment. Hearings on the revised policy are to be held on February 5, 2019 and the revised General Order would be adopted after that time. It should be noted that some existing Dischargers may qualify for conditional exemption from the General Order; some previously exempted activities may need to obtain coverage under the Waiver or enroll under this General Order. Once and if the new rules take effect, all cannabis cultivation within the County will be required to comply with this order.

Accordingly, no new applications will be accepted under the Central Valley Order. Cannabis cultivators currently enrolled under the Central Valley Order may continue to operate under and comply with the requirements of their respective order until they enroll in the Cannabis General Order. All enrollees under the Central Valley Order must transition the Cannabis General Order by July 1, 2019.

The General Order also uses a tiered approach, which includes Tier 1 and Tier 2 but also includes categorization for personal use, indoor commercial cultivation, and outdoor cultivation less than 2,000sf. This system would be applicable statewide upon adoption of the statewide General Order. The General Order also assigns risk factors to cultivation areas based on the slope of the cultivation sites. *Table 4.10-3 - RWQCB General Order Tiers*, and *Table 4.8-4 - Summary of Risk Designations*, show these criteria below:

Table 3-2 - RWQCB General Order Tiers

Personal Use	Personal use exempt Dischargers are very small non-commercial cultivators that are exempt from this General Order (Refer to the General Order for specific exemptions for more information).
Indoor Commercial Cultivation	Indoor commercial cultivation activities are conditionally exempt under this General Order (Refer to the General Order for specific exemptions for more information)
Outdoor Cultivation (<2,000 sf)	Cultivation activities that disturb less than 2,000 square feet may be conditionally exempt under this General Order (Refer to the General Order for specific exemptions and more information.)
Tier 1	Tier 1 Dischargers cultivate cannabis commercially outdoors and have a disturbed area equal to or greater than 2,000 square feet and less than 1 acre (43,560 square feet).
Tier 2	Tier 2 Dischargers cultivate cannabis commercially outdoors, and have a disturbed area equal to or greater than 1 acre
<p>Source: RWQCB, 2018 Notes: Regarding Personal Use, Indoor Commercial Cultivation, and Outdoor Cultivation <2,000 sf, (Refer to the General Order for specific exemptions and for more information). Under the revised General Order, there are no proposed changes to the tiers.</p>	

Table 3-3 - Summary of Risk Designations

Low Risk	Moderate Risk	High Risk
No portion of the disturbed area is located on a slope greater than 30 percent, and	Any portion of the disturbed area is located on a slope greater than 30 percent, and less than 50 percent, and	Any portion of the disturbed area is located within the setback requirements
All of the disturbed area complies with the setback requirements	All of the disturbed area complies with the setback requirements	
<p>Source: RWQCB, 2018 Notes: less than 50 percent, and is the only revised language. Setbacks are defined as follows: 150 ft from perennial watercourses, waterbodies (e.g. lakes ponds, springs); 100 ft from intermittent watercourses or wetlands; and 50 ft from ephemeral watercourses.</p>		

California Green Building Standards Code (CALGreen Code)

The State of California enacted The California Green Building Standards Code (CALGreen Code) as part 11 of The California Building Standards Code (Title 24). The 2016 CALGreen Code, effective on January 1, 2017, contains measures that are designed to improve public

health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and encourage sustainable construction practices.

Under the CALGreen Code, all residential and non-residential sites are required to keep surface water from entering buildings and to incorporate efficient outdoor water use measures. Construction plans are required to show appropriate grading and surface water management methods. Plans should also include outdoor water use plans that utilize weather or soil moisture-controlled irrigation systems. In addition to the above-mentioned requirements, non-residential structures are also required to develop:

1. A SWPPP;
2. An irrigation budget for landscapes greater than 2,500 square feet, and
3. A quantified plan to reduce wastewater by 20 percent through use of water-efficient fixtures or non-potable water systems, such as use of harvested rainwater, grey water, and/or recycled water.

CALGreen also offers a tiered set of voluntary measures to encourage residential and non-residential development that goes beyond the mandatory standards to reduce soil erosion, rainwater capture and infiltration, and use of recycled and/or grey water systems. Non-residential developers are further encouraged to integrate treatment BMPs that result in zero net increase in runoff due to development and can treat runoff from the 85th percentile storms.

SENATE BILLS 610 (CHAPTER 643, STATUTES OF 2001) AND 221 (CHAPTER 642, STATUTES OF 2001) (SEE APPENDIX A)

Senate Bill (SB) 610 and SB 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in five-year increments for a 20-year projection. Under Senate Bill 221, approval by a county of a subdivision of more than 500 homes, or an equivalent project in terms of water demand, requires an affirmative written verification of a sufficient water supply.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter Cologne Act, passed in 1969, acts in concert with the Federal CWA. The Act established the SWRCB and divided the State into nine regions, each overseen by a RWQCB.

The SWRCB is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies; however, much of its daily implementation authority is delegated to the nine RWQCBs.

The Porter Cologne Act provides for the development and periodic review of water quality control plans (basin plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters.

RESOLUTION NO. 68-16 (ANTIDegradation Policy)

SWRCB Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality Water of the State* (Antidegradation Policy), requires that high quality waters of the State of California be maintained consistent with their beneficial uses and water quality objectives as defined in a basin plan. Resolution No. 68-16 prohibits degradation of groundwater by waste discharges unless dischargers meet specific conditions.

RECYCLED WATER POLICY

On February 3, 2009, by Resolution No. 2009-0011, the SWRCB adopted a Recycled Water Policy in an effort to move towards a sustainable water future. In the Recycled Water Policy, it is stated "we declare our independence from relying on the vagaries of annual precipitation and move towards sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse and use of stormwater."

The following goals were included in the Recycled Water Policy:

- Increase use of recycled water over 2002 levels by at least one million-acre feet per year by 2020 and at least two million-acre feet per year by 2030.
- Increase the use of stormwater over use in 2007 by at least 500,000-acre feet per year by 2020 and at least one million-acre feet by year 2030.
- Increase the amount of water conserved in urban and industrial areas by comparison to 2007 by at least 20 percent by 2020.

Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

The Recycled Water Policy provides direction to the RWQCBs regarding issuing permits for recycled water projects, addresses the benefits of recycled water, addresses a mandate for uses of recycled water and indicates that the SWRCB will exercise its authority to the fullest extent possible to encourage the use of recycled water.

TULARE LAKE BASIN PLAN

The Tulare Lake Basin Plan provides quantitative and narrative criteria for a range of water quality constituents applicable to receiving water bodies and groundwater basins within the

basin. Specific water quality objectives are provided for the larger designated water bodies within the region, and more general narrative water quality objectives are provided for all surface waters and groundwater. In general, the narrative objectives require that degradation of water quality not occur due to increases in pollutant loads that will adversely impact the designated beneficial uses of a water body. For example, the narrative objective for inland surface waters for sediment states, “the suspended sediment load and suspended sediment discharge rate of water shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.” Water quality criteria apply within receiving waters as opposed to applying directly to runoff; therefore, water quality from the Basin Plan are utilized as benchmarks to evaluate the potential ecological impacts of Projects runoff on the receiving waters of the proposed Project.

Waterbodies, including surface water and groundwater, with a municipal and domestic supply designated beneficial use (MUN) are not to have concentrations that exceed maximum contaminant levels (MCLs). Federal MCLs are established by U.S. EPA, and California MCLs are established by the California Department of Public Health (CDPH) (California MCLs are in CCR Title 22). The MCLs consist of (1) primary MCLs, which are enforceable standards for contaminants that present a risk to human health, and (2) secondary MCLs, which are non-mandatory standards established to assist public water systems in managing drinking water for aesthetic considerations, such as taste, color and odor, but do not relate to a health risk. The U.S. EPA sets the secondary MCL for TDS at 500 milligrams per liter (mg/L). The CDPH sets a recommended MCL of 500 mg/L, and upper concentrations of 1,000 mg/L and a short-term upper limit of 1,500 mg/L.

California Codes

State of California, Sections 2600(c) and 26100 Business and Professions Code.

State of California Department of Public Health Food and Drug Branch Regulations.

State of California, Section 19353 of the Business and Professions Code, and Sections 11362.775 and 11362.9 of the Health and Safety Code, Federal FDA Practices and Standard Operating Procedures.

Local (City)

Urban Water Management Plan (2015)

This 2015 UWMP describes the City’s water demands and supplies, reliability and water conservation strategies. The 2015 UWMP includes data covering the years from 2011 to 2015. The 2015 UWMP has been prepared to include the recommended chapters,

discussions and data reporting required by the CWC and is based on the 2015 UWMP Guidebook provided by DWR.

Recycled Water Master Plan

The Recycled Water Master Plan is intended to serve as a basis to support the City's decision-making process in selecting recycled water projects. The expansion of the recycled water system will enable the City to offset potable water use, enhance the sustainability of the water supply, and lessen the burden on the wastewater treatment plant percolation ponds that are currently used for effluent discharge.

Municipal Code

Chapter 6-Municipal Services and Utilities includes the following Articles specific to Hydrology and Water Quality.

- Article 3 - Sewage and Water Disposal establishes provisions for the protection of the City's Publicly Owned Treatment Works (POTW) as related to wastewater collection and treatment systems. This Chapter provides a list of discharge prohibitions and local limits for wastewater discharged into the City's POTW. It includes control authority to exercise permitting, inspections and/or enforcement of violations related to the conditions and/or prohibitions set forth in the Fresno Municipal Code or the National Pretreatment Program.
- Article 4 – Wells, includes compliance requirements and development standards specific to water wells.
- Article 5 – Water Regulations, provides the rules and regulations specific to water systems and service connections.
- Article 7 - Urban Storm Water Quality Management and Discharge Control, of the Fresno Municipal Code establishes provisions regarding stormwater discharges. The purpose and intent of Article 7 is to ensure the health, safety, and general welfare of residents, and to protect the water quality of surface water and groundwater resources in a manner pursuant to and consistent with the Federal CWA by reducing pollutants in urban stormwater, discharges to the maximum extent practicable, and by effectively prohibiting non-stormwater discharges to the storm drain system.
- Article 9 – Recycled Water Ordinance, provides the processes, procedures, and requirements to provide recycled water to all service areas in the City identified in the Recycled Water Master Plan (currently under development).

Other applicable City of Fresno Code sections affecting cannabis cultivation, processing and sales are:

- City of Fresno Article 35, Municipal Code Section 9-3312, prohibiting outdoor cultivation of cannabis.

- City of Fresno, Municipal Code Chapter 11, Building Permits and Regulations; Chapter 15, Citywide Development Code; Article 21 of Chapter 12; California Building Code, Title 21.
- City of Fresno, Municipal Code, Article 33, Chapter 9, defining permitted types of retail and commercial cannabis businesses.
- The Project: Fresno Municipal Code, amendment to Sections 15-2739 and 152739.1 Article 33, Chapter 9 and Article 21, Chapter 12 relating to adult use and medicinal cannabis retail and commercial business.

CITY OF FRESNO GENERAL PLAN

Policy PU-7-c. Wastewater Recycling. Pursue the development of a recycled water system and the expansion of beneficial wastewater recycling opportunities, including a timely technical, practicable, and institutional evaluation of treatment, facility siting, and water exchange elements.

Objective PU-8. Manage and develop the City’s water facilities on a strategic timeline basis that recognizes the long life cycle of the assets and the duration of the resources, to ensure a safe, economical, and reliable water supply for existing customers and planned urban development and economic diversification.

Policy PU-8-a Forecast Need. Use available and innovative tools, such as computerized flow modeling to determine system capacity, as necessary to forecast demand on water production and distribution systems by urban development, and to determine appropriate facility needs.

Policy PU-8-b Potable Water Supply and Cost Recovery. Prepare for provision of increased potable water capacity (including surface water treatment capacity) in a timely manner to facilitate planned urban development consistent with the General Plan. Accommodate increase in water demand from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law, and recognizing the differences in terms of quantity, quality and reliability of the various types of water in the City’s portfolio.

Policy PU-8-c Conditions of Approval. Set appropriate conditions of approval for each new development proposal to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy.

Policy PU-8-d CIP Update. Continue to evaluate Capital Improvement Programs and update them, as appropriate, to meet the demands of both existing and planned development consistent with the General Plan.

Policy PU-8-e Repairs. Continue to evaluate existing water production and distribution systems and plan for necessary repair or enhancement of damaged or antiquated facilities.

Policy PU-8-f Water Quality. Continue to evaluate and implement measures determined to be appropriate and consistent with water system policies, including prioritizing the use of groundwater, installing wellhead treatment facilities, constructing above-ground storage and surface water treatment facilities, and enhancing transmission grid mains to promote adequate water quality and quantity.

Policy PU-8-g Review Project Impact on Supply. Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.

City of Fresno Specific Plans

The City of Fresno has 11 Specific Plans. Specific Plans guide future development within its defined area. Plans layout long-term goals, as well as an implementation plan for immediate and midterm actions. Policies that assist in implementing these goals, provide a basis for urban and economic growth with the plan area. Development within those plan areas that have been repealed, development standards will be deferred to the Development Code for the corresponding zone district. The Specific Plan and Community Plans are intended to be consistent with the General Plan. During the development of these plans, full implementation of the General Plan is intended.

City of Fresno Community Plans

The City of Fresno has eight Community Plans. Community Plans establish the City's statement of policy for the development of the specific area defined in the plan. Community Plans lays out the quality and character of future development, a service plan for distribution, extent, and capacity of public and private services, which are essential to the development of a community. Any development, within the community plan areas that have been repealed, development standards will be deferred to the Development Code for the corresponding zone district.

City of Fresno Neighborhood Plans

The City of Fresno has three Neighborhood Plans. Neighborhood Plans include the areas of Pinedale, El Dorado Park, and Old Fig Garden. A Neighborhood Plan can provide guidelines which depicts how a neighborhood grows by adopting policies pertaining to those certain goals. This provides a channel of communication between residents and the local agency by being engage with the decision making as it affects the development of the neighborhood.

SECTION 4 - PROJECT WATER DEMAND

The proposed Project ordinance would allow for cultivation, distribution, and manufacturing and testing laboratories in addition to Cannabis retailers. In general, the proposed Project would allow for the following:

Cultivation, Distribution, and Manufacturing

- Warehousing.
- Cultivation activities and Warehousing are similar in regard to the ratio of acreage to personnel and equipment.
- Eight total businesses would be permitted inside the Cannabis Innovation Zone. Eight would be permitted within industrial zoned property within one-half mile of Highway 99 between Shaw and Clinton Avenues, or within one mile of Highway 99 north of Shaw and south of Clinton Avenues, or within one mile of Highway 180 west of Highway 99. All buildings in which a cultivator, distributor, or manufacturer is located shall be located no closer than 1,000 feet from any property boundary containing a residence, school, daycare, or youth center.
- It is assumed that Cultivation, Distribution, and Manufacturing will be limited to a combined total of 16 acres

Testing Laboratories

- General Light Industrial
- Testing Laboratories activities and General Light Industrial are similar in regard to the 'Type' of use. General Light Industrial has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities including printing, material testing, and assembly of data processing equipment.
- There is no limit on how many may be permitted.
- It is assumed that Testing Laboratories will be limited to a combined total of 100,000 sq. ft.

Cannabis Retailers

- Marijuana Dispensary
- 21 total retail locations, this includes up to 14 medicinal and/or adult use cannabis retail locations (two per Council District); with the potential to add seven additional retailers (one additional per Council District) upon Council Resolution, located in Downtown Neighborhood (DTN), Downtown General (DTG), Commercial Main Street (CMS), Commercial Community (CC), Commercial Regional (CR), Commercial General (CG), Commercial Highway (CH), Neighborhood Mixed-Use (NMX), Corridor/Center Mixed-Use (CMX), or Regional Mixed-Use (RMX) zone districts. In addition, retailers would be required to maintain a minimum distance of 800 feet from any property boundary containing another cannabis retailer, school, daycare

center, or youth center (i.e. parks, playgrounds, facilities hosting activities for minors).

- It is assumed that Cannabis Retailers will be limited to a combined total of 55,000 sq. ft.

Figure 1-2 depicts the location of the land use sites. In summary, uses are assumed to affect the following acreages:

- Warehousing (Cultivation, Distribution, and Manufacturing) – 700,000 sq. ft. (16 acres);
- General Light Industrial (Testing Laboratories) – 100,000 sq. ft.; and
- Marijuana Dispensary (Cannabis Retailers) – 55,000 sq. ft.

Based on available data on water usage by land use type, light industrial warehousing and distribution uses are estimated to have an annual water usage of 0.07-acre feet per year per 1,000 sq. ft. (City of Santa Barbara, 2009). If all 16 commercial cannabis licenses were for distribution only, the estimated water usage would be 48.8-acre feet per year (16 acres x 43,560 square feet per acre x .07-acre feet per year/ 1,000 sq. ft.). Light manufacturing uses are estimated to have an annual water usage of 0.15-acre feet per year per 1,000 sq. ft. If all 16 commercial cannabis licenses were for manufacturing only, the estimated water usage would be 104.5-acre feet per year (16 acres x 43,560 square feet per acre x 0.15-acre feet per year/ 1,000 sq. ft.).

Water usage for indoor cultivation of cannabis can vary widely based on many factors (type of watering techniques, crop rotation, species, etc.). In order to calculate an estimated amount of water consumption for this proposed Project, certain assumptions were used based on available data. CalNORML estimates one gram of cannabis requires one gallon of water to produce (California NORML, 2015). Indoor cannabis cultivation is estimated to produce 40 grams per sq. ft. per harvest (BOTECH Analysis Corporation). Available data suggests the total number of harvests per year range from 1-12, with most sources using 4 harvests as a reasonable estimate (Caulkins, 2010).

Using these assumptions, 160 grams of cannabis would be produced per sq. ft. per year. Assuming a total of 700,000 sq. ft. of cultivation, 112,000,000 grams of Cannabis could be produced per year. This would equate to 112,000,000 gallons of water per year, or 343-acre feet per year, if all 700,000 sq. ft. were permitted as cultivation only.

There is no significant water usage for testing laboratories or retail businesses, apart from that customary for these types of non-cannabis usage (restrooms, sinks, etc.). Conservatively, water usage for testing laboratories would be 2.06-acre feet (100,000 sq. ft./43,560 x 0.9-acre feet per acre per year). Retail businesses would use 2.15-acre feet (55,000 sq. ft./43,560 x 1.7-acre feet per acre). The maximum estimated water use for both testing laboratories and retail businesses would be 4.21-acre feet per year.

It is reasonable to assume there would be a mix of cultivation, distribution, manufacturing, retail and testing laboratories. In order to accurately estimate the total water demand for the proposed Project, the following combination of facilities were used:

- Eight commercial cannabis licenses would be used for cultivation
- Four for manufacturing
- Four for distribution
- 21 retail businesses (55,000 sq. ft.)
- Five testing laboratories (100,000 sq. ft.)

**Table 441
Project Estimated Water Demand**

License Type	Number of Licenses	Water Demand per License (af/yr)	Total Water Demand (af/yr)
Cultivation	8	21.4	171.2
Manufacturing	4	6.5	21.1
Distribution	4	3.1	12.4
Retail	21	0.1	2.1
Testing Laboratories	5	0.4	2.1
Total	42	31.5	208.9

As noted in Table 4-1, the estimated maximum total water demand of the Project is approximately 208.9-acre feet per year, approximately 0.17% of the City’s current total water demand (120,067) acre feet per year.

For comparison purposes, with average single-family residential unit in California utilizes approximately 362 gallons of water per day (Aquacraft Water Engineering & Management, 2011), which equates to 0.41-acre feet per year. Annual estimated water usage for this proposed Project would be equivalent to 510 new single-family homes.

The City of Fresno Municipal Code prohibits open-air, non-structure-housed cannabis production. Available, peer-reviewed, literature discloses no documented wastewater or surface runoff-water quality impacts of structure-housed cannabis production or processing; however, best management practices should include impermeable flooring and the submittal of a Wastewater Control Plan, which will require quantification of wastewater contaminants and proper pretreatment prior to disposal.

A Wastewater Control Plan requires applicants of any cultivation facility to comply with BMPs for the capture and reuse of produced water. Based on information from companies specializing in water reuse systems, wastewater reuse can exceed 80% reductions in overall water use (Doherty, n.d.). Common systems include equipment to capture produced water and store it in holdings

tanks. UV sterilization is used to eliminate microbes. Water is then pumped through a reverse osmosis (RO) membrane to remove inorganic solids (salts). Discharge tempering systems are used to regulate the quality and quantity of the discharge to regulate levels of salts and biochemical oxygen demand. These systems allow for data logging to be used to comply with City regulations pertaining to discharge.

The City of Fresno's water usage, even in multiple dry years, approximates 120,067-acre feet per year. The incremental usage of the potential cannabis facilities is less than one percent (0.17) of that usage. The Project incorporates dispersion of cannabis facilities, assuring no localized impacts to the overall water system.

SECTION 5 - PROJECT WATER SUPPLY ADEQUACY

2015 Urban Water Master Plan

The subject Master Plan documents and analyzes the availability of groundwater and surface water supplies (Kings River, San Joaquin River, recycled water for normal water years, single dry years, and multiple dry years through 2040). Tables 5-1 through 5-5 depict these conclusions.

Table 5-1
Normal Year Supply and Demand Comparison (af)

	2020	2025	2030	2035	2040
Supply totals (af) (DWR Table 6-9)	308,700	329,900	342,000	354,100	366,200
Demand totals (af) (DWR Table 4-3)	235,700	264,000	274,000	292,900	301,100
Difference (af)	73,000	65,900	67,900	61,200	65,100

Reported volumes are rounded to the nearest 100.

Table 5-2
Single Dry Year Supply and Demand Comparison (af)

	2020	2025	2030	2035	2040
Supply totals (af)	198,000	216,400	225,800	235,200	244,500
Demand totals (af)	179,900	205,400	212,900	229,100	234,500
Difference (af)	18,100	11,000	12,900	6,100	10,000

Table 5-3
Multiple Dry Years Supply and Demand Comparison (af)

		2020	2025	2030	2035	2040
First Year	Supply totals	260,900	280,900	291,800	302,700	313,600
	Demand totals	213,800	217,800	229,300	229,100	234,500
	Difference	47,100	63,100	62,500	73,600	79,100
Second year	Supply totals	271,500	291,700	302,800	313,900	325,000
	Demand totals	225,100	229,200	240,900	231,800	241,400
	Difference	46,400	62,500	61,900	82,100	83,600
Third year	Supply totals	219,200	238,600	249,000	259,400	269,700
	Demand totals	179,900	205,400	212,900	229,100	234,500
	Difference	39,300	33,200	36,100	30,300	35,200
Fourth year	Supply totals	198,000	216,400	225,800	235,200	244,500
	Demand totals	179,900	205,400	212,900	229,100	234,500
	Difference	18,100	11,000	12,900	6,100	10,000

Reported volumes are rounded to the nearest 100.

**Table 5-4
Multiple Dry Year Water Demands (af)**

Demand Type	Dry Period Beginning				
	2020	2025	2030	2035	2040
Multiple-dry year first year demand					
Water Consumption	146,930	158,300	165,270	176,360	181,400
Groundwater Recharge	33,900	12,400	16,400	0	0
System Losses	11,740	12,650	13,210	14,100	14,500
Recycled Water	21,200	34,400	34,400	38,600	38,600
Total Demand	213,770	217,750	229,280	229,060	234,500
Multiple-dry year second year demand					
Water Consumption	146,930	158,300	165,270	176,360	181,400
Groundwater Recharge	45,200	23,800	28,000	2,700	6,900
System Losses	11,740	12,650	13,210	14,100	14,500
Recycled Water	21,200	34,400	34,400	38,600	38,600
Total Demand	225,070	229,150	240,880	231,760	241,400
Multiple-dry year second year demand					
Water Consumption	146,930	158,300	165,270	176,360	181,400
Groundwater Recharge	0	0	0	0	0
System Losses	11,740	12,650	13,210	14,100	14,500
Recycled Water	21,200	34,400	34,400	38,600	38,600
Total Demand	179,870	205,350	212,880	229,060	234,500
Multiple-dry year second year demand					
Water Consumption	146,930	158,300	165,270	176,360	181,400
Groundwater Recharge	0	0	0	0	0
System Losses	11,740	12,650	13,210	14,100	14,500
Recycled Water	21,200	34,400	34,400	38,600	38,600
Total Demand	179,870	205,350	212,880	229,060	234,500

**Table 5-5
Multiple Dry Year Water Supply (af)**

Demand Type	Dry Period Beginning				
	2020	2025	2030	2035	2040
Multiple-dry year first year supply					
Groundwater	130,400	135,100	139,700	144,300	148,900
Surface Water – FID	80,952	84,757	88,592	92,427	96,232
Surface Water – USBR	30,000	30,000	30,000	30,000	30,000
Recycled – RWRf Tertiary	7,000	16,000	16,000	16,000	16,000
Recycled – RWRf Secondary	10,000	10,000	10,000	10,000	10,000
Recycled Wells, Tertiary	2,500	5,000	7,500	10,000	12,500
Total Supply	260,852	280,857	291,792	302,727	313,632
Multiple-dry year second year supply					
Groundwater	130,400	135,100	139,700	144,300	148,900
Surface Water – FID	84,439	88,408	92,408	96,408	100,377
Surface Water – USBR	37,200	37,200	37,200	37,200	37,200
Recycled – RWRf Tertiary	7,000	16,000	16,000	16,000	16,000
Recycled – RWRf Secondary	10,000	10,000	10,000	10,000	10,000
Recycled Wells, Tertiary	2,500	5,000	7,500	10,000	12,500
Total Supply	271,539	291,708	302,808	313,908	324,977
Multiple-dry year third year supply					
Groundwater	130,400	135,100	139,700	144,300	148,900
Surface Water – FID	69,250	72,505	75,786	79,066	82,322
Surface Water – USBR	0	0	0	0	0
Recycled – RWRf Tertiary	16,000	16,000	16,000	16,000	16,000
Recycled – RWRf Secondary	10,000	10,000	10,000	10,000	10,000
Recycled Wells, Tertiary	2,500	5,000	7,500	10,000	12,500
Total Supply	219,150	238,605	248,986	259,366	269,722
Multiple-dry year third year supply					
Groundwater	130,400	135,100	139,700	144,300	148,900
Surface Water – FID	48,063	50,322	52,599	54,876	57,135
Surface Water – USBR	0	0	0	0	0
Recycled – RWRf Tertiary	7,000	16,000	16,000	16,000	16,000
Recycled – RWRf Secondary	10,000	10,000	10,000	10,000	10,000
Recycled Wells, Tertiary	2,500	5,000	7,500	10,000	12,500
Total Supply	197,963	216,522	225,799	235,176	244,535

SECTION 6 - URBAN WATER PLAN DATA UPDATE

Although the Master Plan made limited assumptions regarding multiple dry year water sources, its analysis of supply sufficiency is not (because of groundwater availability), dependent upon such assumptions. This section briefly describes the progress which the City has made in achieving surface water supply reliability and groundwater recharge since 2015.

Figure 6-1 depicts the current (2019) status of the water system upgrade projects referenced to in the 2015 Urban Water Master Plan. They include:

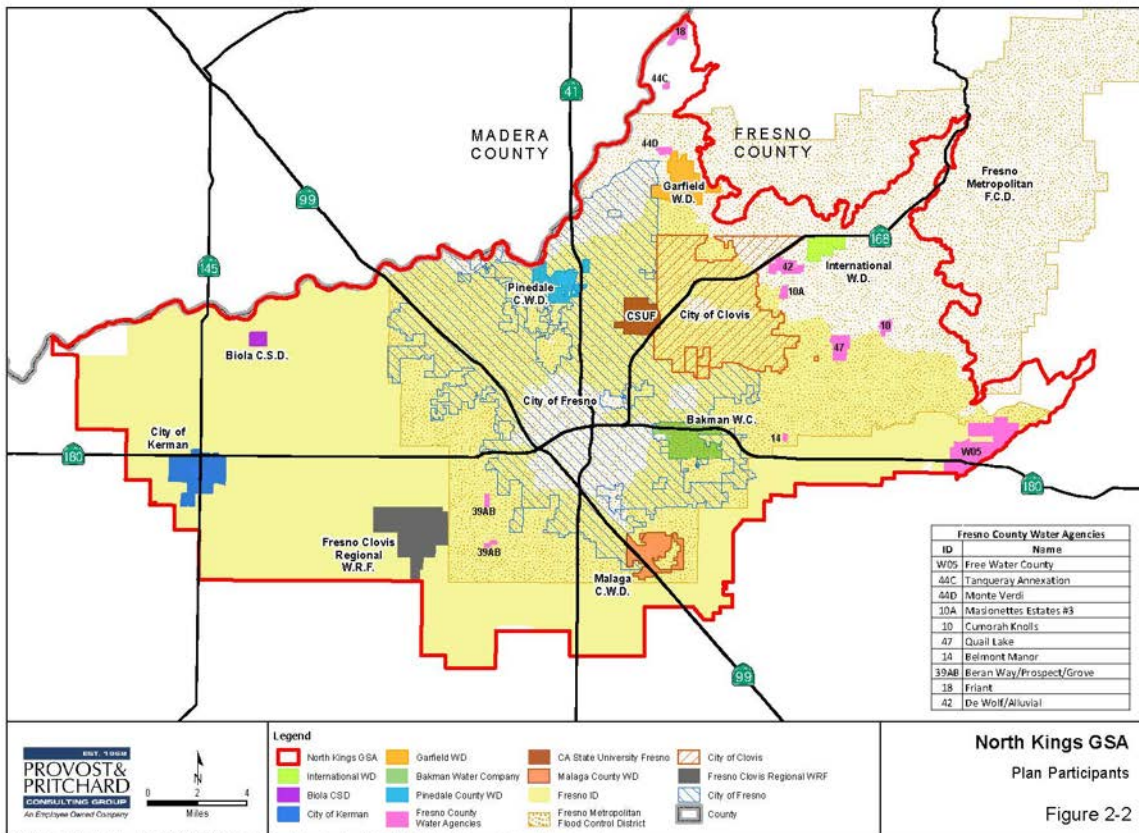
- Southeast area tertiary treatment recharge facilities, at 54 million gallons per day (expandable to 80 million gallons per day) with a 13-mile connecting pipeline;
- A southwest area, five million gallons per day, tertiary treatment recharge facility;
- A Clovis-Fresno 1 ½ mile emergency intertie, 16" diameter; and
- A 5.6-mile U.S. Bureau of Reclamation pipeline intertie to the northeast area surface water treatment facility.

As a result of these and the other Figure 6-1 depicted improvements, "normal year" 2020 water supply for the City may approach 46 percent groundwater, 50 percent surface water and 4 percent reclaimed water.

SECTION 7 - GROUNDWATER SUSTAINABILITY PLAN

The Kings Subbasin is located in the southern part of the San Joaquin Valley with the majority of surface water being supplied from the Kings and San Joaquin Rivers. The North Kings Groundwater Sustainability Agency (NKGSA) is one of seven GSAs within the Kings Groundwater Subbasin (DWR Bulletin 118: 5-022.8). Through its various surface water resources and several decades of proactive groundwater recharge activities, this portion of the Kings Basin have not experienced significant overdraft conditions experienced elsewhere in the basin. Drought and other challenges, however, have contributed to a gradual decline in overall groundwater conditions that will be addressed through implementation of the Groundwater Sustainability Plan (GSP) for the North Kings region.

The North Kings GSA finalized the Groundwater Sustainability Plan (GSP) and submitted it to the California Department of Water Resources (DWR) on January 28, 2020. This document was developed in compliance with the California Department of Water Resources' [Groundwater Sustainability Plan Emergency Regulations](#). Developed pursuant to Water Code Section 10733.2, the regulations describe the components of groundwater sustainability plans, intra-basin coordination agreements, and the methods and criteria to be used by DWR to evaluate those plans and coordination agreements. The NKGSA's GSP has been posted on the DWR SGMA portal and a 75-day public comment period commenced on January 31, 2020 and will end on April 15, 2020. The DWR has 2 years to complete its review of the NKGSA GSP and make a determination about its adequacy.



The NKGSA member agencies and entities have agreed to have each groundwater pumping entity mitigate for the estimate net impact of their pumping. The priority of each agency is to develop projects that augment the water supply using surface water to meet demands or provide groundwater recharge within the area of extraction. As mentioned in Section 2.1 of this WSA, the City of Fresno is decreasing the volume of groundwater pumped by maximizing the use of surface water and groundwater recharge.

All future land-use changes will need to consider the net groundwater impact to the NKGSA. And future General Plan updates are required to consider the NKGSP and the responsibility of each member and participating agency. The proposed Project will not adversely affect the ability of the City of Fresno to comply with the NKGSA GSP.

Chapter 6 of the City of Fresno General Plan discusses the planning, provision, and maintenance of water, wastewater, solid waste systems, and other facilities operated by the City. The objective of Section 6.4 is to – “Manage and develop the City’s water facilities on a strategic timeline basis that recognizes the long-life cycle of the assets and the duration of the resources, to ensure a safe, economical, and reliable water supply for existing customers and planned urban development and economic diversification.” The relevant policies are listed in Section 3 – Applicable Codes and Regulations, above.
(North Kings Groundwater Sustainability Agency (NKGSA), 2020)

SECTION 8 - CONCLUSION

In review of all the data in this assessment, including the 2015 Urban Water Master Plan projection tables (Section 5), the estimated Project water demands (Section 4), and the updated information regarding the City's water system (Section 6), it is conclusively evident that the City of Fresno's current and projected water supply is adequate to supply Project demands.

The City's water system can easily accommodate the Project water demand and should be found to be adequate in accord with Senate Bill 610 as the Environmental Impact Report (EIR) is considered for approval by the City (See Appendix B).

APPENDIX A

**SENATE BILL 610
(CHAPTER 643, STATUTES OF 2001)**

Chapter 643, Statutes of 2001 (Senate Bill 610)

An act to amend Section 21151.9 of the Public Resources Code, and to amend Sections 10631, 10656, 10910, 10911, 10912, and 10915 of, to repeal Section 10913 of, and to add and repeal Section 10657 of, the Water Code, relating to water. Approved by Governor October 9, 2001. Filed with Secretary of State October 9, 2001.

The people of the State of California do enact as follows:

SECTION 1. (a) The Legislature finds and declares all of the following:

(1) The length and severity of droughts in California cannot be predicted with any accuracy.

(2) There are various factors that affect the ability to ensure that adequate water supplies are available to meet all of California's water demands, now and in the future.

(3) Because of these factors, it is not possible to guarantee a permanent water supply for all water users in California in the amounts requested.

(4) Therefore, it is critical that California's water agencies carefully assess the reliability of their water supply and delivery systems.

(5) Furthermore, California's overall water delivery system has become less reliable over the last 20 years because demand for water has continued to grow while new supplies have not been developed in amounts sufficient to meet the increased demand.

(6) There are a variety of measures for developing new water supplies including water reclamation, water conservation, conjunctive use, water transfers, seawater desalination, and surface water and groundwater storage.

(7) With increasing frequency, California's water agencies are required to impose water rationing on their residential and business customers during this state's frequent and severe periods of drought.

(8) The identification and development of water supplies needed during multiple-year droughts is vital to California's business climate, as well as to the health of the agricultural industry, environment, rural communities, and residents who continue to face the possibility of severe water cutbacks during water shortage periods.

(9) A recent study indicates that the water supply and land use planning linkage, established by Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code, has not been implemented in a manner that ensures the appropriate level of communication between water agencies and planning agencies, and this act is intended to remedy that deficiency in communication.

(b) It is the intent of the Legislature to strengthen the process pursuant to which local agencies determine the adequacy of existing and planned future water supplies to meet existing and planned future demands on those water supplies.

SEC. 2. Section 21151.9 of the Public Resources Code is amended to read:

21151.9. Whenever a city or county determines that a project, as defined in Section 10912 of the Water Code, is subject to this division, it shall comply with Part 2.10 (commencing with Section 10910) of Division 6 of the Water Code.

SEC. 3. Section 10631 of the Water Code is amended to read:

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be

based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments as described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the location, amount, and sufficiency of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (1) An average water year.
- (2) A single dry water year.
- (3) Multiple dry water years.

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
- (I) Agricultural.

(2) The water use projections shall be in the same five-year increments as described in subdivision (a). (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.
- (J) Wholesale agency programs.
- (K) Conservation pricing.
- (L) Water conservation coordinator.
- (M) Water waste prohibition.
- (N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of such savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

- (1) Take into account economic and non-economic factors, including environmental, social, health, customer impact, and technological factors.
- (2) Include a cost-benefit analysis, identifying total benefits and total costs.
- (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
- (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase

in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

SEC. 3.5. Section 10631 of the Water Code is amended to read:

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments as described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(1) An average water year.

(2) A single dry water year.

(3) Multiple dry water years. For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
- (I) Agricultural.

(2) The water use projections shall be in the same five-year increments as described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.
- (J) Wholesale agency programs.
- (K) Conservation pricing.
- (L) Water conservation coordinator.
- (M) Water waste prohibition.
- (N) Residential ultra-low-flush toilet replacement programs.

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(i) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).
SEC. 4. Section 10656 of the Water Code is amended to read:

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

SEC. 4.3. Section 10657 is added to the Water Code, to read:

10657. (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

SEC. 4.5. Section 10910 of the Water Code is amended to read:

10910. (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined in Section 10912, that may supply water for the project. If the city or county is not able to identify any public water system that may supply water for the project, the city or county shall prepare the water assessment required by this part after consulting with any entity serving domestic water supplies whose service area includes the project site, the local agency formation commission, and any public water system adjacent to the project site.

(c) (1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

(3) If the projected water demand associated with the proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the water supply assessment for the project shall include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

(d) (1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.

(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment:

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project. A water supply assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

(g) (1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

(2) Prior to the expiration of the 90-day period, if the public water system intends to request an extension of time to prepare and adopt the assessment, the public water system shall meet with the city or county to request an extension of time, which shall not exceed 30 days, to prepare and adopt the assessment.

(3) If the public water system fails to request an extension of time, or fails to submit the assessment notwithstanding the extension of time granted pursuant to paragraph (2), the city or county may seek a writ of mandamus to compel the governing body of the public water system to comply with the requirements of this part relating to the submission of the water supply assessment.

(h) Notwithstanding any other provision of this part, if a project has been the subject of a water supply assessment that complies with the requirements of this part, no additional water supply assessment shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and that has complied with the requirements of this part and for which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has concluded that its water supplies are sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial uses, unless one or more of the following changes occurs:

(1) Changes in the project that result in a substantial increase in water demand for the project.

(2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project.

(3) Significant new information becomes available which was not known and could not have been known at the time when the assessment was prepared.

SEC. 5. Section 10911 of the Water Code is amended to read:

10911. (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

(1) The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.

(2) All federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.

(3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to be able to acquire additional water supplies.

(b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(c) The city or county may include in any environmental document an evaluation of any information included in that environmental document provided pursuant to subdivision (b). The city or county shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses. If the city or county determines that water supplies will not be sufficient, the city or county shall include that determination in its findings for the project.

SEC. 6. Section 10912 of the Water Code is amended to read:

10912. For the purposes of this part, the following terms have the following meanings:

(a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

(b) If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

(c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3000 or more service connections. A public water system includes all of the following:

(1) Any collection, treatment, storage, and distribution facility under control of the operator of the system which is used primarily in connection with the system.

(2) Any collection or pretreatment storage facility not under the control of the operator that is used primarily in connection with the system.

(3) Any person who treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption.

SEC. 7. Section 10913 of the Water Code is repealed.

SEC. 8. Section 10915 of the Water Code is amended to read:

10915. The County of San Diego is deemed to comply with this part if the Office of Planning and Research determines that all of the following conditions have been met:

(a) Proposition C, as approved by the voters of the County of San Diego in November 1988, requires the development of a regional growth management plan and directs the establishment of a regional planning and growth management review board.

(b) The County of San Diego and the cities in the county, by agreement, designate the San Diego Association of Governments as that review board.

(c) A regional growth management strategy that provides for a comprehensive regional strategy and a coordinated economic development and growth management program has been developed pursuant to Proposition C.

(d) The regional growth management strategy includes a water element to coordinate planning for water that is consistent with the requirements of this part.

(e) The San Diego County Water Authority, by agreement with the San Diego Association of Governments in its capacity as the review board, uses the association's most recent regional growth forecasts for planning purposes and to implement the water element of the strategy.

(f) The procedures established by the review board for the development and approval of the regional growth management strategy, including the water element and any certification process established to ensure that a project is consistent with that element, comply with the requirements of this part.

(g) The environmental documents for a project located in the County of San Diego include information that accomplishes the same purposes as a water supply assessment that is prepared pursuant to Section 10910.

SEC. 9.

Section 3.5 of this bill incorporates amendments to Section 10631 of the Water Code proposed by both this bill and AB 901. It shall only become operative if (1) both bills are enacted and become effective on or before January 1, 2002, (2) each bill amends Section 10631 of the Water Code, and (3) this bill is enacted after AB 901, in which case Section 3 of this bill shall not become operative.

SEC. 10.

No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

APPENDIX B

CONSISTENCY WITH DWR GUIDELINES

CITY OF FRESNO CANNABIS ORDINANCE WSA – CONSISTENCY WITH DWR GUIDELINES

Guidelines Section Number and Title (DWR, 2003)	Guidelines Direction	Relevant WSA Section and Response
Section 1.0 (page 2). Does SB 610 or SB 221 apply to the proposed project	Is the project subject to SB 610? Is the project subject to CEQA (Water Code §10910(a)? If yes, continue.	WSA Section 1.2. Yes, the Project is subject to SB 610 and CEQA.
	Is it a “Project” as defined by Water Code §10910(a) or (b)? If yes, to comply with SB 610 go to Section 2.0, page 4.	WSA Section 1.1. Yes, the Project is considered to meet the definition of “project” per Water Code §10912(a) or (b).
	Is the project subject to SB 221? Does the tentative map include a “subdivision” as defined by Government Code §66473.7(a)(1)? If no, stop.	No- the Project is for a commercial ordinance.
Section 2.0 (page 4) who will prepare the SB 610 analysis?	Is there a public water system (“water supplier”) for the project (Water Code §10910(b)? If no, go to Section 3.0, page 6.	WSA Section 1.3. Yes, the Project sites will be connected to the City of Fresno public water system.
Section 3.0 (page 6). Has an assessment already been prepared that includes this project?	Has this project already been the subject of an assessment (Water Code §10910(h)? If no, go to Section 4.0, page 8.	No, the Project has not been the subject of an assessment.
Section 4.0 (page 8). Is there a current Urban Water Management Plan?	Is there an adopted urban water management plan (Water Code §10910(c)? If yes, continue. If yes, the information from the UWMP related to the proposed water demand for the project may also be used for carrying out Section 5.0, Steps 1 and 2, Section 7.0; proceed to Section 5.0, page 10 of the Guidelines.	WSA Section 1.3. Yes, there is an adopted UWMP for the Project area (the City of Fresno). Information contained in the UWMP was used in the preparation of the WSA and cited accordingly.
	Is the project water demand for the project accounted for in the most recent UWMP (Water Code §10910(c)(2)? If no, got to Section 5.0, page 10.	No
Section 5.0 (page 10). What information should be included in an assessment?	Step One (page 13). Documenting wholesale water supplies.	The Project is not a retail water supplier and would not include the use of wholesale water supplies.
	Ste Two (page 17). Documenting Supply if Groundwater is a Source.	The Kings Subbasin is a part of the proposed water supply. WSA Section 2.1.
	Specify if a groundwater management plan or any other specific authorization for groundwater management for the basin has been adopted and how	WSA Sections 2.4 and 3.

Guidelines Section Number and Title (DWR, 2003)	Guidelines Direction	Relevant WSA Section and Response
	it affects the water supplier's use of the basin.	
	Description and analysis of the amount and location of groundwater pumped by the water supplier for the past five years. Include information on proposed pumping locations and quantities. The description and analysis is to be based on information that is reasonably available, including, but not limited to, historic use records from DWR.	WSA Sections 5 provides a description of the City's groundwater usage.
	Analysis of the location, amount, and sufficiency of groundwater that is projected to be pumped by the water supplier.	WSA Section 4. The quantity of water banked in the Kings Subbasin is sufficient for the Project.
	Step 3 (page 21). Documenting project demand (Project Demand Analysis).	WSA Section 4.
	Step 4 (page 26). Documenting dry year(s) supply.	WSA Section 5.
	Step 5 (page 31). Documenting dry year(s) demand.	WSA Section 5.
Section 6.0 (page 33). Is the projected water supply sufficient or insufficient for the proposed project?		WSA Section 5 concludes that identified water supply/supplies are sufficient for the Project.
Section 7.0 (page 35). If the projected supply is determined to be insufficient	Does the assessment conclude that supply is "sufficient"? If no, continue.	WSA Section 5 concludes that sufficient water supplies are available for the Project.
Section 8.0 (page 38). Final SB 610 assessment actions by lead agencies.	The lead agency shall review the WSA and must decide whether additional water supply information is needed for its consideration of the proposed project. The lead agency "shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses."	The WSA for the Project must be approved prior to or in concurrence with the EIR.
	<i>The description of the groundwater basin may be excerpted from the groundwater management plan, from DWR Bulletin 118, California's Groundwater, or from some other document that has been published and that discusses the</i>	WSA Section 2.3 includes the data from and references to the Urban Water Master Plan's and DWR Bulletin 118's further data.

Guidelines Section Number and Title (DWR, 2003)	Guidelines Direction	Relevant WSA Section and Response
	<i>basin boundaries, type of rock that constitutes the aquifer, variability of the aquifer material, and total groundwater in storage (average specific yield times the volume of the aquifer).</i>	
	<i>In an adjudicated basin the amount of water the urban supplier has the legal right to pump should be enumerated in the court decision.</i>	Not applicable; the Basin is not adjudicated.
	The Department of Water Resources has projected estimates of overdraft, or “water shortage”, based on projected amounts of water supply and demand (basin management) are projected by the Watermaster agency (AVEK) in WSA Section 3.2, the hydrologic region level in Bulletin 160, California Water Plan Update. Estimates at the basin or subbasin level will be projected for some basins in Bulletin 118. If the basin has not been evaluated by DWR, data that indicate groundwater level trends over a period of time should be collected and evaluated.	Basin groundwater resources are discussed in WSA Section 2.4.
	If the evaluation indicates an overdraft due to existing groundwater extraction, or projected increases in groundwater extraction, describe actions and/or program designed to eliminate the long-term overdraft condition.	WSA Section 3.2. The referenced 2015 Urban Water Master Plan describes in detail the subject actions and programs.